Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC DOCKET No. 94-102
To Ensure Compatability with	)	RM-8143
Enhanced 911 Emergency Calling Systems	)	

Comments of AirTouch Communications, Inc. in Response to Further Notice of Proposed Rulemaking

AirTouch Communications, Inc. ("AirTouch") hereby submits its comments regarding the Commission's Further Notice of Proposed Rulemaking in the above-captioned proceeding.

Summary of Position

The Commission's Order in Docket 94-102 ("Order") establishes near term and long term requirements for the provisioning of enhanced 911 services by wireless carriers. Implementation of that Order will require development of technical solutions; coordination by wireless carriers, state and local governments, and public safety answering point operators ("PSAP"); modifications to the public switched telecommunications network; and funding mechanisms. Pending resolution of these complex requirements, it is premature to impose additional location and real time reporting requirements. In addition, it is important for the Commission to recognize that some local and national public safety agencies do not support 911 access through non-activated phones. In light of these issues and concerns, the Commission should request that the relevant parties provide it with a progress report in 18 months as to the status of wireless E911 deployment, including new developments in location capabilities.

Funding and Cost Issues Need to be Addressed Prior to the Imposition of Additional Requirements

The Commission's Order requires two significant changes to be made by wireless carriers for the treatment of 911 calls. First, within 12-18 months carriers must be capable of relaying a caller's number and cell site location to the designated PSAP. Second, no later than five years after the effective date of the Order, information must be provided by the wireless carrier for locating a wireless 911 caller within a radius of 125 meters, using longitude and latitude data, with this degree of accuracy for 67 percent of the 911 calls processed. This second requirement imposes significant new costs on wireless networks, and will require massive changes in PSAP capabilities in order to take advantage of the location data. A period of development, evaluation, and review of the impact of these new requirements is essential prior to any decision to expand these obligations further.

One of the very real challenges of the FCC's Order is to develop the estimated cost and implementation schedule for Phases I and II. In light of the extensive industry debate, coordination, planning, implementation, testing, and training needed to implement Phase I requirements, a period of twelve to eighteen months is an extremely ambitious schedule in which to comply even with the Phase I requirements. In California, for example, PSAPs and 911 tandems require substantial upgrades to receive and utilize ten digit numbers, an essential requirement for automatic number identification ("ANI") and cell site location, both of which are mandated in Phase I. However, State administrators, such as those in California are only starting to consider the potential impact of these new rules on budgets for the next fiscal year, with limited funds available for the enhanced wireline facilities needed to be used to support wireless E911.

For example, in response to the FCC's Order, California recently formed a Wireless 911 Task Force[1] "to produce recommendations to help ensure a viable public safety emergency response system for wireless telephone systems users." However, the Task Force lacks vital material information on the availability of viable solutions for Phase I and II, since they are only now beginning to be developed by national standards bodies and switch manufacturers. Once carriers and suppliers are able to provide estimated costs and availability dates to the Task Force, the Task Force will then recommend funding alternatives for carriers providing these new wireless E911 services, as well as, recommend funding approaches for recovering the substantial costs associated with wireline 911 infrastructure and PSAPs which must also be funded by the state. The Task Force will use this new information to submit a report to the Governor's office in February, 1997.

Requiring Additional Location Capability is Premature

In its Further NPRM, the Commission seeks comment on additional specific location and real time updating for E911 calls. The Commission proposes that carriers should be required to provide to PSAPs, after the initial five-year period, information that locates a wireless 911 caller within a radius of 40 feet using longitude, latitude, and vertical location data for 90 percent of the 911 calls processed. In light of the existing challenges and uncertainties posed by the existing Order, AirTouch believes that the new proposal is premature.

It is unclear that the current requirement of achieving 125 meter two dimensional radius in 67 percent of the cases will be achievable even during the next five years. The triangulation-based automatic location information ("ALI") technology underlying the Consensus Agreement

[1] The Task Force is made up of representatives of California state agencies, the California Highway Patrol, NENA, APCO, the state 911 fund administrator, PCIA, the state cellular association, the California Public Utilities Commission, PSAP administrators, and automobile associations.

may not work with all air interfaces and does not work well in many urban and rural areas.[2] In addition, wireless ALI standards must be set and prototype devices must be manufactured and tested. Proposing that carriers provide 911 caller information within a 40 feet two dimensional radius in 90 percent of the cases will make even worse the already burdensome and very expensive challenge.

Furthermore, requiring the updating of callers' location information and vertical location represents a quantum leap in infrastructure costs and loss of capacity. Triangulation-based ALI is achieved through shedding co-channel traffic on cells within a large area surrounding the 90 degree to 120 degree beam of the cell in which the 911 caller is located. During high traffic periods, this means dropping calls. Several base stations are used to then used to triangulate the caller's location. Updating of the 911 caller's location information would require the shedding of traffic throughout the whole system, because the carrier would have to do the above described procedure for any cell the caller may drive through. This would make frequency reuse in wireless systems much more difficult if not impossible. That would result in substantial harm to the public by restructuring the efficient use of available spectrum. Additionally, supplying vertical location information would require base stations within the sector area which were located at various elevation angles. This is unrealistic and impracticable.

The intended beneficiaries of three dimensional location capability—911 callers in high rise buildings in urban areas—may in fact receive minimal value for these high cost enhancements. Such callers are likely to have access to wireline phones that already are capable of more specific location information than would be available from a 40 foot vertical dimension location. Given the early stages of evolution of technological solutions, the uncertain value for

[2] Some rural areas may have only one omnidirectional antenna servig a 30 mile area, whereas, in some urban areas there are problems with reflections of signals off of buildings.

emergency services, and the pace of change and service development in the market, no additional Commission requirements should be imposed at this time.

AirTouch has been approached by several technology companies presenting "state-of-the-art" location capability schemes based on GPS. Even these companies do not propose in the foreseeable future being able to locate callers within 40 feet with 90 percent accuracy. In addition, these technologies are only in the prototype stage and work with only certain types of technology. Three dimensional location capability has not been presented as a realistic next step for location technologies.

The current cost estimates for the system changes that would be required by wireless carriers to comply with requirements of even the original order are $30,000 per cell site, and $40,000 per PSAP (Order at 33). However, these costs do not include other network and system upgrades that the PSTN and wireless carriers would need to make. In California alone, there are more than 3,000 cell sites with thousands more planned for growth and new PCS networks. There are approximately 500 PSAPs in California. Conservatively, it is estimated that these new requirements could impose more than $100 million in additional costs--yet the state has a 911 budget of only $70 million for wireline services only. These costs will be passed on to consumers in the form of 911 surcharges or other cost recovery mechanisms. Costly solutions are likely to result in those communities with inadequate funds being left further behind in the level of access to E911.

The economic burdens are even worse when it is recognized that if even a single PSAP were to require wireless carriers to provide such capability, that single decision automatically requires that these changes to be made throughout the wireless carrier's system, even if no other PSAP requires such upgrades.

A better alternative for the Commission would be to direct the same PSAP and wireless carrier associations which presented the Emergency Access Position Paper to the Commission to

prepare a report in 18 months that will describe the status of wireless E911 deployment, including new developments in location capabilities. At that time, the Commission would then decide, based on this better information, how to best proceed in the public interest.

Carriers Should Not Be Required to Transmit Non-code Identification 911 Calls

The Commission has determined that, within one-year from the effective date of the rules, covered carriers would be required, where requested by the PSAP administrator, to transmit to PSAPs those 911 calls from wireless handsets that do not transmit a code identification. In the Further Notice, the Commission has asked for comment on whether, within a reasonable time after the one year period, covered carriers should be obligated to transmit all such calls, even without a request from the PSAP.

AirTouch urges the Commission not to require carriers to transmit all non-code identification 911 calls to PSAPs. Accepting non-code identification 911 calls is not supported by representatives of emergency service providers, such as the National Emergency Number Association ("NENA"), because of problems associated with the inability of the public safety answering point to call such users back.

NENA correctly believes that phones whose users cannot be identified are more prone to be used for fraudulent or prank calling, which not only burdens PSAPs but also has led to loss of life of emergency responders.

If non-code identification mobile phone users can count on the completion and acceptance by PSAPs of their calls, but not complete other non-emergency calls, the natural tendency will be to increase calls to 911 for non-emergency services. At a time when the volume of 911 calls from valid subscribers is putting a tremendous burden on PSAP resources, adding further call volumes for non-emergency callers is unreasonable. The decision to accept or not accept non-code identification mobile callers should continue to reside with the PSAP and

carriers should not be required to transmit non-code identification callers without a request from a PSAP.

Consumer Education Programs are Important

Consumer education programs are an important service in which wireless carriers can play a significant role. As the Commission has noted, wireless customers often purchase mobile phones for safety and security reasons. Education of customers in the proper use of 911 service and the differences between wireline and wireless 911 service is useful to provide effective emergency services.

In California, for example, AirTouch has been very active, through the state cellular association, with other carriers, the state police and 911 emergency providers to develop a program to inform mobile phone users how to use wireless 911 services effectively. Representatives of these groups recently kicked off a major drive to provide new and existing customers with information on issues such as how wireless 911 calls are handled and the importance of knowing the caller's location as well as when to call 911 and when to call a non-emergency number. Similar programs and coordinated efforts in other states are underway. Carriers should be free to personalize 911 educational programs to conform to local capabilities and issues. Educational programs should be driven at a local rather than federal level to better reflect the diversity of market capabilities and priorities.

Conclusion

For the foregoing reason, the Commission should defer additional location and real time updating requirements. The Commission is currently trying to facilitate competition to Local Exchange Carriers. We applaud this effort, but the FCC must be careful that it does not implement regulations such as the ones suggested in the Further Notice that would impose onerous technical requirements on the wireless industry without adequate public benefit. The Commission should certainly encourage consumer education programs for wireless customers so

that they learn how to properly use wireless E911 services and so that consumers will know the operational differences between wireline 911 and wireless 911 calls.

Respectfully submitted

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